

PATENT
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Atty. Dkt. No. INFN/MB0061

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A semiconductor device, comprising:
a substrate having a process surface;
a first contact and a second contact arranged on the substrate, a second contact surface of the second contact being at a greater distance, in a substrate-normal direction, from the substrate than a first contact surface of the first contact;
a first patterned metal plane-layer in which a first conductor is disposed above the first contact in the substrate-normal direction and electrically connected to the first contact surface; and
a second patterned metal plane-layer in which a second conductor is disposed above the second contact in the substrate-normal direction and electrically connected to the second contact surface; wherein the second metal plane-layer is disposed at a greater distance, in the substrate-normal direction, from the substrate than the first metal plane-layer;
wherein the second contact is electrically connected to the second conductor without an intermediate connection to any conductor of the first metal plane-layer; and
wherein the first conductor is electrically connected to another second conductor in the second patterned metal plane-layer which is disposed above the first conductor in the substrate-normal direction.
2. (Original) The semiconductor device of claim 1, wherein the second contact is an emitter contact of a bipolar transistor, and the first contact is one of a base contact and a collector contact of the bipolar transistor, or one of a source contact, a gate contact, and a drain contact of a MOS transistor.
3. (Currently Amended) The semiconductor device of claim 1, wherein the first contact is connected to the conductor of the first metal plane-layer via a first contact

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hole which extends in the substrate-normal direction and is filled with an electrically conductive contact-hole filling material.

4. (Currently Amended) The semiconductor device of claim 3, wherein the second contact is connected to the second conductor of the second metal ~~plane~~layer via a second contact hole, which extends in the substrate-normal direction and is filled with an electrically conductive contact-hole filling material.

5. (Withdrawn) A method for fabricating a semiconductor device, comprising:
providing a substrate, having a process surface;
defining a first contact and a second contact on the substrate, a second contact surface of the second contact being located at a greater distance, in a substrate-normal direction from the substrate than a first contact surface of the first contact;
electrically connecting the first contact to a first conductor, of a first patterned metal plane; and
electrically connecting the second contact to a second conductor of a second patterned metal plane, wherein the second metal plane is disposed at a greater distance, in the substrate-normal direction, from the substrate than the first metal plane.

6. (Withdrawn) The method of claim 5, wherein the second contact is an emitter contact of a bipolar transistor, and the first contact is one of a base contact and a collector contact of the bipolar transistor, or one of a source contact, a gate contact, and a drain contact of a MOS transistor.

7. (Withdrawn) The method of claim 5, wherein electrically connecting the first contact comprises:
defining a first contact hole, which ends at the first contact surface and extends in the substrate-normal direction, in an insulator;
filling the contact hole with an electrically conductive contact-hole filling material;
and

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defining the first conductor of the first metal plane disposed above the first contact in the substrate-normal direction to electrically connect to the contact-hole filling material.

8. (Withdrawn) The method of claim 7, wherein electrically connecting the second contact comprises:

defining a second contact hole, which ends at the second contact surface and extends in the substrate-normal direction, in an insulator;

filling the contact hole with an electrically conductive contact-hole filling material;
and

defining the second conductor of the second metal plane disposed above the second contact in the substrate-normal direction to electrically connect to the contact-hole filling material.

9. (Withdrawn) The method of claim 5, wherein during a process for electrically connecting the second contact to the conductor of the second metal plane, at least one other conductor of the first metal plane is electrically connected to another conductor of the second metal plane.

10. (Canceled)

11. (Canceled)

12. (Withdrawn) A method for fabricating a semiconductor device, comprising:

providing a substrate having a process;

defining a first contact and a second contact on the substrate, with a second contact surface of the second being at greater distance, in the substrate-normal direction, from the substrate than a first contact surface of the first contact;

electrically connecting the first contact to a first conductor of a patterned metal plane through a contact hole, which extends in the substrate-normal direction and is filled with electrically conductive contact-hole filling material; and

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electrically connecting and adjoining the second contact to a second conductor of the patterned metal plane.

13. (Withdrawn) The method of claim 12, wherein the second contact is an emitter contact of a bipolar transistor, and the first contact is one of a base contact and a collector contact of the bipolar transistor, or one of a source contact, a gate contact, and a drain contact of a MOS transistor.

14. (Withdrawn) The method of claim 12, wherein electrically connecting the first contact comprises:

defining a first contact hole, which ends at the first contact and extends in the substrate-normal direction, in an insulator;

filling the first contact hole with an electrically conductive contact-hole filling material; and

defining the first conductor of the patterned metal plane to electrically connect to the contact-hole filling material.

15. (Withdrawn) The method of claims 12, wherein electrically connecting the second contact comprises:

defining the second contact surface, which is oriented in the substrate-normal direction, of the second contact utilizing a planar polishing step (CMP BPSG, CMP W); and

defining the second conductor of the patterned metal plane to adjoin the second contact surface of the second contact in an electrically conductive manner.

16. (Currently Amended) The semiconductor device of claim 1, wherein the first contact conductor is electrically connected to the first conductor and to the another second conductor without any intermediate connection to an active region.

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17. (Currently Amended) The semiconductor device of ~~claim 16~~ claim 1, wherein the second contact is electrically connected to the second conductor without any intermediate connection to an active region.

18. (Currently Amended) A semiconductor device, comprising:
a substrate having a process surface;
a first contact and a second contact arranged on the substrate, a second contact surface of the second contact being at a greater distance, in a substrate-normal direction, from the substrate than a first contact surface of the first contact;
a plurality of first conductors disposed in a first patterned metal ~~plane~~ layer in which one of the first conductors is disposed above the first contact in the substrate-normal direction and directly connected to the first contact surface through a first contact hole filled with conductive material; and
a plurality of second conductors disposed in a second patterned metal ~~plane~~ layer in which one of the second conductors is disposed above the second contact in the substrate-normal direction and directly connected to the second contact surface through a first contact hole filled with conductive material;
wherein the second metal ~~plane~~ layer is disposed at a greater distance, in the substrate-normal direction, from the substrate than the first metal ~~plane~~ layer; and
wherein the first conductor is directly connected to another one of the second conductors in the second patterned metal ~~plane~~ layer which is disposed above the first conductor in the substrate-normal direction.

19. (Previously Presented) The semiconductor device of claim 18, wherein the second contact is an emitter contact of a bipolar transistor, and the first contact is one of a base contact and a collector contact of the bipolar transistor.

20. (Previously Presented) The semiconductor device of claim 18, wherein the first contact is one of a source contact, a gate contact, and a drain contact of a MOS transistor.